## Overview

X-Frame Revit components have been designed to operate as standard Revit modelling functions which would be familiar to a novice user.

X-Frame Revit base components are dynamic and change automatically depending on their dimensions. This allows the user to focus on designing with the X-Frame components rather than learning the intricacies of the system.

## Components

The X-Frame base components have been loaded into standard building fabric tools (walls & roof) which utilise a pre-defined grid structure. These tools are primarily used by the industry to produce curtain walls, windows and other repetitive building components.

The grid dimensions determine the rules which X-Frame modules operates under and subsequently calculates the correct X-Frame panel types to be reported without the user intervening.

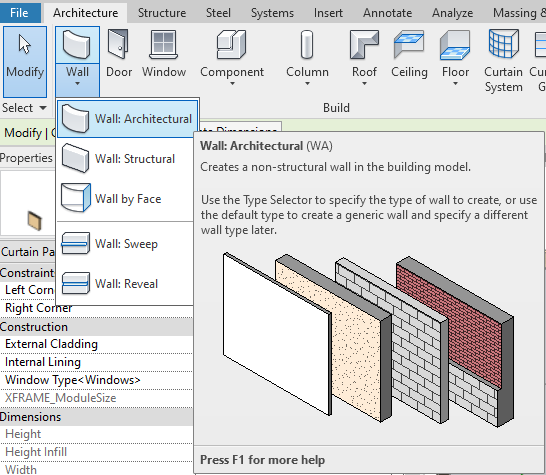
### X-Frame family structure

1. Generic Model: Base X-Frame componentry
2. Curtain Panel: X-Frame assembled panel module
   1. Subtype: X-Frame door curtain panel module
   2. Subtype: X-Frame window curtain panel module
3. System Family Types:
   1. Curtain wall: For wall modelling
   2. Sloped glazing: For roof and floor modelling

## Walls

### Overview

Walls can be modelled under the standard wall function, specifically as curtain walls.



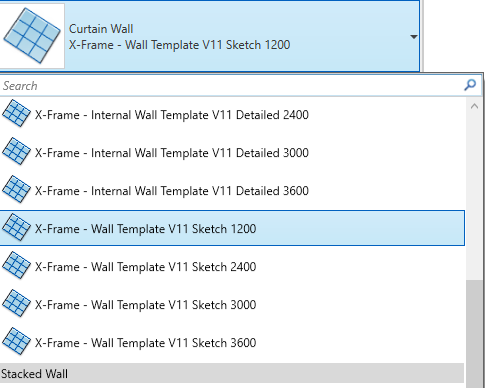
Wall types are pre-set at certain modular heights to assist in planning for an efficient X-Frame design, from 1.2m to 3.6m.

The selected wall module will terminate at the prescribed height. Walls can be drawn higher as Revit will keep repeating the module height and truncate the panels at odd heights.

The X-Frame component supports odd panel sizes and will report an ‘infill’ panel which can be easily be identified its’ red colour.

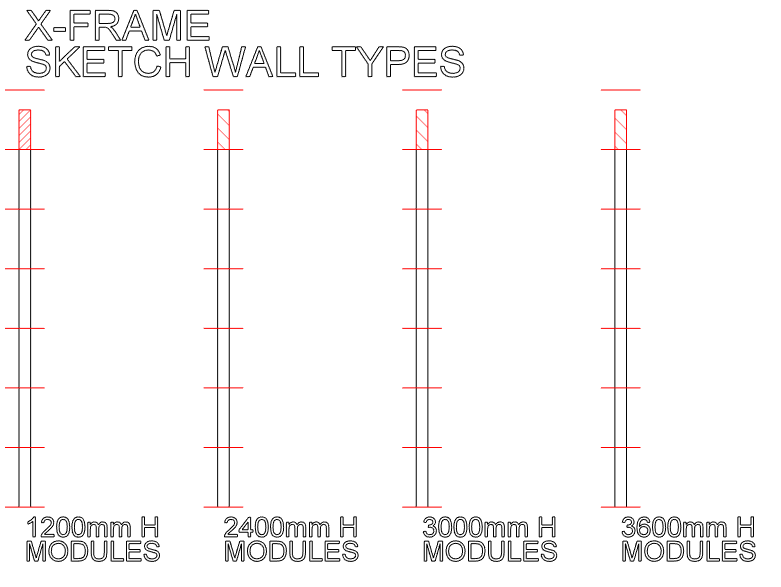
There are two types of X-Frame Revit walls: Sketch and Detailed Design.

### Sketch Walls



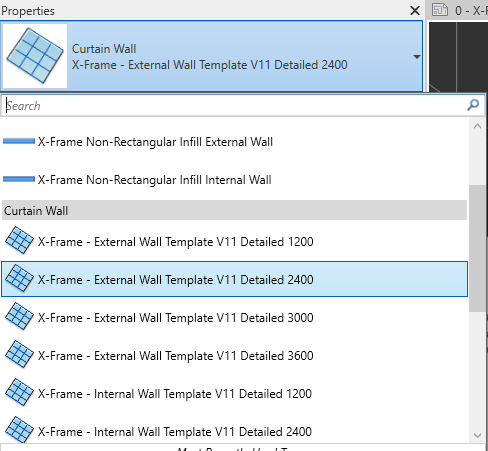
Sketch walls are designed to provide the most speed and efficiency in modelling and manipulating the model design.

Guide lines and warnings are active to assist with efficient module planning and to educate the user as to where improvements can be made.



It is recommended when initially modelling with X-Frame that sketch walls are used to allow Revit to process changes quickly and improve the overall experience.

When a design is at the point where more detail is required, sketch walls can be easily converted to detailed walls.



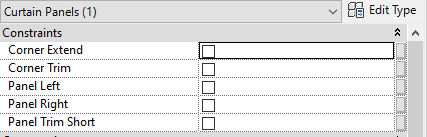
### Detailed Walls

When converting X-Frame to detailed mode, Revit will automatically populate the model with the correct X-Frame panels and provide the user with options to deal with corner and tee junction conditions.

### Wall Corners

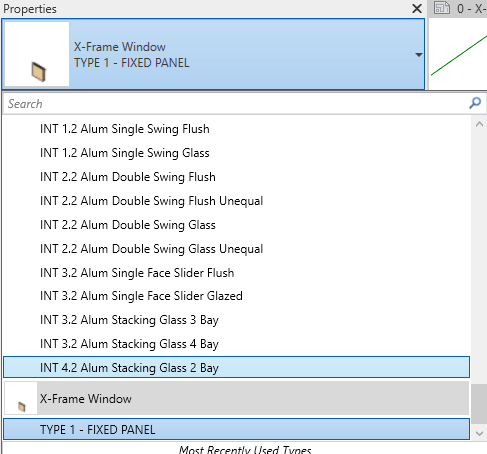
Detailing corners with X-Frame is a simple as selecting the checkboxes which applies to the desired corner.

Corner conditions rely on the user to extend one panel and trim the other to create a neat butt joint:



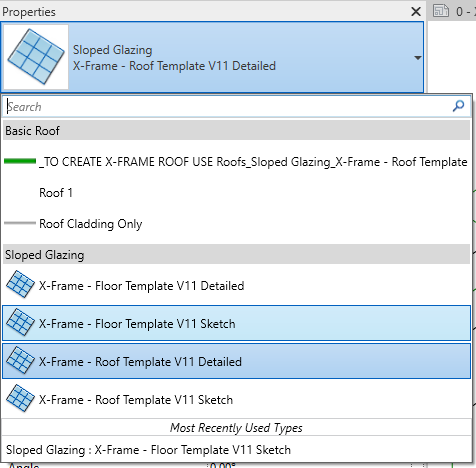
## Windows & Doors

Individual panels can be manipulated by the user tabbing to them, unpinning and swapping the panel module for a door or window as available from the types list.



## Roof

Roofs can be modelled under the standard roof function, sloped glazing.



## Floors

## Scheduling

## Dynamo

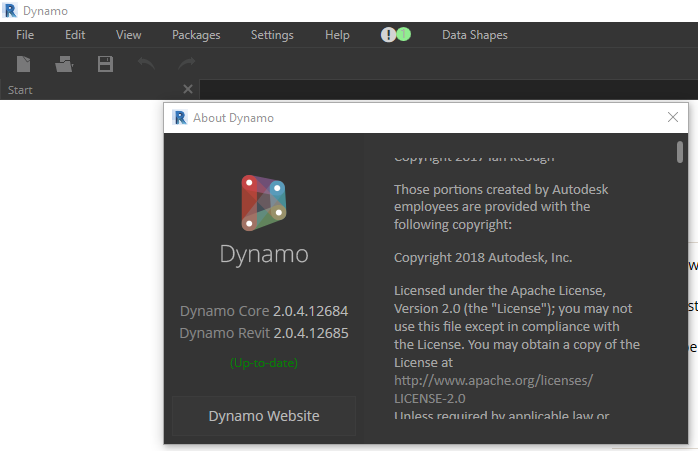
Requires Dynamo version 2.03 to be installed.

Download the version here:

<https://dyn-builds-data.s3-us-west-2.amazonaws.com/DynamoInstall2.0.4.exe>

Install Dynamo 2.0.4 and re-open Revit. When opening Dynamo you may be asked which version you want to open – select version 2.0.4

You can check the version you are running by selecting the Help menu and selecting About



The Dynamo script uses a number of nodes which must be downloaded and imported in to the library.

The Orchid package needs to be installed, which cannot be installed via the inbuilt manager.

To download the package go to: <https://github.com/erfajo/OrchidForDynamo/raw/master/Builds/OrchidForDynamo_230.exe>

Download OrchidForDynamo\_230.exe (Orchid executable installer)

The save location of the installer is not important.

When prompted select Install.

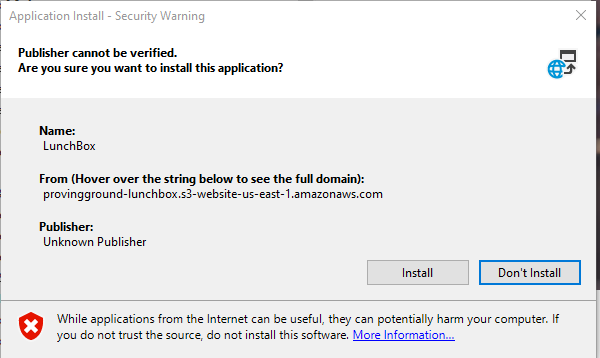
The Lunchbox package also needs to be installed, which cannot be installed via the inbuilt manager.

To download the package go to: <https://provingground.io/tools/lunchbox/download-lunchbox-for-grasshopper/>

Download lunchbox (lunchbox.installer.application)

The save location of the installer is not important.

When prompted select Install



Place the two dynamo files (XFrame Dynamo Script V2.dyn and XFrame Panel Data Export V2.dyf) and template excel file in a location where you wish to save your export.

With Dynamo closed, open the Dynamo Player. Browse to the folder which contains the dynamo files and click ok.

You will now see the XFrame Dynamo Script V2 listed.

Select the Edit Inputs button to the right of the Play button.

Browse to the location of the excel template and click open.

Press the Play button to run the script.

The excel file should open and populate with the data extracted from the Revit file.